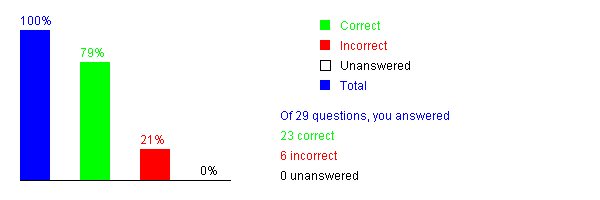
**Introduction to Programming Using Python,**[**Y. Daniel Liang**](http://www.cs.armstrong.edu/liang)

**Chapter 6 Functions**



Please send suggestions and errata to [y.daniel.liang@gmail.com](mailto:y.daniel.liang@gmail.com). Indicate which book you are using. Thanks!

*Sections 6.2 Defining a Function*

***1***  If a function does not return a value, by default, it returns \_\_\_\_\_\_\_\_\_\_\_.

 A. None

 B. int

 C. double

 D. public

 E. null

The correct answer is A  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***2***  The header of a function consists of \_\_\_\_\_\_\_\_\_\_\_\_.

 A. function name

 B. function name and parameter list

 C. parameter list

The correct answer is B  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***3***  A function \_\_\_\_\_\_\_\_\_.

 A. must have at least one parameter

 B. may have no parameters

 C. must always have a return statement to return a value

 D. must always have a return statement to return multiple values

The correct answer is B  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

*Sections 6.3 Calling a Function*

***4***  Arguments to functions always appear within \_\_\_\_\_\_\_\_\_\_.

 A. brackets

 B. parentheses

 C. curly braces

 D. quotation marks

The correct answer is B  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***5***  Does the function call in the following function cause syntax errors?  
  
import math  
def main():  
    math.sin(math.pi)  
  
main()

 A. Yes

 B. No

The correct answer is B  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg  
Explanation: A value-returning function can also be invoked as a statement. In this case, the caller simply ignores the return value. This is rare, but permissible if the caller is not interested in the return value.

***6***  Each time a function is invoked, the system stores parameters and local variables in an area of memory, known as \_\_\_\_\_\_\_, which stores elements in last-in first-out fashion.

 A. a heap

 B. storage area

 C. a stack

 D. an array

The correct answer is C  
Your answer B is incorrect http://www.cs.armstrong.edu/liang/image/wrong.jpg

*Sections 6.4 Functions With/Without Return Values*

***7***  Which of the following should be defined as a None function?

 A. Write a function that prints integers from 1 to 100.

 B. Write a function that returns a random integer from 1 to 100.

 C. Write a function that checks whether current second is an integer from 1 to 100.

 D. Write a function that converts an uppercase letter to lowercase.

The correct answer is A  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***8***  A function with no return statement returns \_\_\_\_\_\_.

 A. void

 B. nothing

 C. 0

 D. None

The correct answer is D  
Your answer B is incorrect http://www.cs.armstrong.edu/liang/image/wrong.jpg

***9***  Consider the following incomplete code:  
  
def f(number):  
  # Missing function body  
  
print(f(5))  
  
The missing function body should be \_\_\_\_\_\_\_\_.

 A. return "number"

 B. print(number)

 C. print("number")

 D. return number

The correct answer is D  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

*Sections 6.5 Positional and Keyword Arguments*

***10***  Given the following function header:  
  
def f(p1, p2, p3, p4)  
  
Which of the following is correct to invoke it?

 A. f(1, 2, 3, 4)

 B. f(p1 = 1, 2, 3, 4)

 C. f(p1 = 1, p2 = 2, p3 = 3, 4)

 D. f(p1 = 1, p2 = 2, p3 = 3, p4 = 4)

 E. f(1, 2, 3, p4 = 4)

The correct answer is ADE  
Your answer A is incorrect http://www.cs.armstrong.edu/liang/image/wrong.jpg

***11***  Given the following function  
  
def nPrint(message, n):  
    while n > 0:  
        print(message)  
        n -= 1  
  
What will be displayed by the call nPrint('a', 4)?

 A. aaaaa

 B. aaaa

 C. aaa

 D. invalid call

 E. infinite loop

The correct answer is B  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***12***  Given the following function  
  
def nPrint(message, n):  
    while n > 0:  
        print(message)  
    n -= 1  
  
What will be displayed by the call nPrint('a', 4)?

 A. aaaaa

 B. aaaa

 C. aaa

 D. invalid call

 E. infinite loop

The correct answer is E  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***13***  Given the following function  
  
def nPrint(message, n):  
    while n > 0:  
        print(message)  
        n -= 1  
  
What is k after invoking nPrint("A message", k)?  
  
k = 2  
nPrint("A message", k)

 A. 0

 B. 1

 C. 2

 D. 3

The correct answer is C  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***14***  Given the following function  
  
def nPrint(message, n):  
    while n > 0:  
        print(message)  
        n -= 1  
  
What is k after invoking nPrint("A message", k)?  
  
k = 2  
nPrint(n = k, message = "A message")

 A. 0

 B. 1

 C. 2

 D. 3

The correct answer is C  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

*Sections 6.6 Passing Parameters by Values*

***15***  When you invoke a function with a parameter, the value of the argument is passed to the parameter. This is referred to as \_\_\_\_\_\_\_\_\_.

 A. function invocation

 B. pass by value

 C. pass by reference

 D. pass by name

The correct answer is B  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

*Section 6.9 The Scope of Variables*

***16***  A variable defined inside a function is referred to as \_\_\_\_\_\_\_\_\_\_.

 A. a global variable

 B. a function variable

 C. a block variable

 D. a local variable

The correct answer is D  
Your answer B is incorrect http://www.cs.armstrong.edu/liang/image/wrong.jpg

***17***  A variable defined outside a function is referred to as \_\_\_\_\_\_\_\_\_\_.

 A. a global variable

 B. a function variable

 C. a block variable

 D. a local variable

The correct answer is A  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***18***  Whenever possible, you should avoid using \_\_\_\_\_\_\_\_\_\_.

 A. global variables

 B. function parameters

 C. global constants

 D. local variables

The correct answer is A  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***19***  What will be displayed by the following code?  
  
x = 1  
def f1():  
    y = x + 2  
    print(y)  
  
f1()  
print(x)

 A. 1 3

 B. 3 1

 C. The program has a runtime error because x is not defined.

 D. 1 1

 E. 3 3

The correct answer is B  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***20***  What will be displayed by the following code?  
  
x = 1  
def f1():  
    x = 3  
    print(x)  
  
f1()  
print(x) 

 A. 1 3

 B. 3 1

 C. The program has a runtime error because x is not defined.

 D. 1 1

 E. 3 3

The correct answer is B  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***21***  What will be displayed by the following code?  
  
x = 1  
def f1():  
    x = x + 2  
    print(x)  
  
f1()  
print(x)

 A. 1 3

 B. 3 1

 C. The program has a runtime error because x is not defined.

 D. 1 1

 E. 3 3

The correct answer is C  
Your answer B is incorrect http://www.cs.armstrong.edu/liang/image/wrong.jpg

***22***  What will be displayed by the following code?  
  
x = 1  
def f1():  
    global x  
    x = x + 2  
    print(x)  
  
f1()  
print(x) 

 A. 1 3

 B. 3 1

 C. The program has a runtime error because x is not defined.

 D. 1 1

 E. 3 3

The correct answer is E  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

*Section 6.10 Default Arguments*

***23***  What will be displayed by the following code?  
  
def f1(x = 1, y = 2):  
    x = x + y  
    y += 1  
    print(x, y)  
  
f1()

 A. 1 3

 B. 3 1

 C. The program has a runtime error because x and y are not defined.

 D. 1 1

 E. 3 3

The correct answer is E  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***24***  What will be displayed by the following code?  
  
def f1(x = 1, y = 2):  
    x = x + y  
    y += 1  
    print(x, y)  
  
f1(2, 1)

 A. 1 3

 B. 2 3

 C. The program has a runtime error because x and y are not defined.

 D. 3 2

 E. 3 3

The correct answer is D  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***25***  What will be displayed by the following code?  
  
def f1(x = 1, y = 2):  
    x = x + y  
    y += 1  
    print(x, y)  
  
f1(y = 2, x = 1)

 A. 1 3

 B. 2 3

 C. The program has a runtime error because x and y are not defined.

 D. 3 2

 E. 3 3

The correct answer is E  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***26***  Which of the following function headers is correct?

 A. def f(a = 1, b):

 B. def f(a = 1, b, c = 2):

 C. def f(a = 1, b = 1, c = 2):

 D. def f(a = 1, b = 1, c = 2, d):

The correct answer is C  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

*Section 6.11 Returning Multiple Values*

***27***  What will be displayed by the following code?  
  
def f1(x = 1, y = 2):  
    return x + y, x - y  
  
x, y = f1(y = 2, x = 1)  
print(x, y)

 A. 1 3

 B. 3 1

 C. The program has a runtime error because the function returns the multiple values

 D. 3 -1

 E. -1 3

The correct answer is E  
Your answer D is incorrect http://www.cs.armstrong.edu/liang/image/wrong.jpg

*Section 6.13 Function Abstraction and Stepwise Refinement*

***28***  \_\_\_\_\_\_\_\_\_\_ is to implement one function in the structure chart at a time from the top to the bottom.

 A. Bottom-up approach

 B. Top-down approach

 C. Bottom-up and top-down approach

 D. Stepwise refinement

The correct answer is B  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg

***29***  \_\_\_\_\_\_\_\_\_\_ is a simple but incomplete version of a function.

 A. A stub

 B. A function

 C. A function developed using botton-up approach

 D. A function developed using top-down approach

The correct answer is A  
Your answer is correct http://www.cs.armstrong.edu/liang/image/correct.jpg